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January 26, 2017

Mr. Kevin Halloran
Environmental Group Manager (Operations)
Compliance Specialist
Pennsylvania Department of Environmental Protection
Clean Water Program
400 Waterfront Drive
Pittsburgh, PA 15222-4745

Re: Fourth Quarter 2016 Compliance Progress Report
2013 Consent Order and Agreement
United States Steel Corporation – Clairton Works
Clairton, Pennsylvania

Dear Mr. Halloran:

This Quarterly Progress Report has been prepared to conform with the requirements of Paragraph 12 of the Corrective Actions Section of a March 15, 2013 Consent Order and Agreement (2013 COA) among United States Steel Corporation (U. S. Steel); Koppers Industries, Inc. (Koppers); and the Pennsylvania Department of Environmental Protection (PADEP) regarding activities being conducted at the U. S. Steel Mon Valley Works Clairton Plant in Clairton, Pennsylvania. Specifically, Paragraph 12 of the 2013 COA Corrective Actions Section requires that within 30 days after the end of each calendar quarter, U. S. Steel is required to submit to the PADEP a progress report that provides the following:

- A description of the actions that have been taken during that quarter toward achieving compliance with the COA
- All sampling and analytical data required for that quarter by the COA
- A description of all activities scheduled for the next quarter
- A description of any problems or delays encountered in the performance of the activities required by the COA

To assist in compliance with the requirements of the 2013 COA, U. S. Steel contracted CB&I Government Solutions, Inc. (CB&I), a third party, to complete a 120-Day Compliance Summary Report, a 180-Day Groundwater Characterization Work Plan (GCWP), and the quarterly progress reports.

The 2013 COA enables PADEP to act under its authority to administer and enforce The Clean Streams Law (Act 394 of 1937, Public Law [P.L.] 1987, as amended, 35 P.S. §§ 691.1-691.1001 ["Clean Streams Law"]; Section 1917-A of the Administrative

Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. §510-17) and the rules and regulations promulgated thereunder.

The 2013 COA lists a series of findings that describe the overall project setting and identify the broad extent of groundwater impacts from historic plant operations to a public potable water supply; it also discusses unauthorized National Pollutant Discharge Elimination System (NPDES) discharges reported by U. S. Steel to PADEP. Further, the 2013 COA provides a list of corrective actions to be implemented by U. S. Steel and/or Koppers that will ultimately culminate in the development and approval of an updated Groundwater Monitoring and Control Plan for the Clairton Plant. The activities conducted during the fourth quarter of 2016 to comply with the 2013 COA are discussed in the following paragraphs.

COA Well Sampling and Analysis

Routine monitoring of existing COA wells located throughout the plant as mandated by the Third Amendment of the COA was completed. Per the Third Amendment of the COA, select monitoring wells throughout the plant are to be sampled bi-monthly and quarterly. Sampling of the COA wells at the specified schedule was performed by Veolia Water. A summary of the results of the sampling and monitoring is included as an attachment and has been prepared by Veolia Water as a stand-alone document.

Activities Scheduled for Next Quarter

Bi-monthly and quarterly gauging and sampling of COA wells will continue in the first quarter of 2017. Work activities associated with the Groundwater Characterization Work Plan will continue pending receipt of PADEP comments or concurrence with the recommendations included in the Summary Report–Implementation and Completion of Groundwater Characterization Work Plan dated April 29, 2015. Response from the PADEP regarding this submittal is still pending as of the date of this writing.

As recommended in the Summary Report–Implementation and Completion of Groundwater Characterization Work Plan, additional delineation activities are recommended and are being planned for implementation. The data will be evaluated and remedial alternatives defined as needed and/or further collection of data will be recommended to delineate any data gaps identified. If further data gaps are identified following completion of the recommended tasks, a subsequent summary report will be prepared within 90 days from receipt of the final laboratory analytical data following the completion of four consecutive quarterly sampling events to be preceded by the completion of monitoring point/staff gauge installation. The summary report will describe the work completed, describe the findings of that work, and provide recommendations based on those findings that may include further delineation. However, if all data gaps have been adequately resolved after implementation of the recommended actions in the Summary Report–Implementation and Completion of Groundwater Characterization Work Plan, including the completion of four consecutive quarters of sampling following the installation of

additional monitoring points and staff gauges, the Groundwater Site Characterization Report specified in Paragraph 6 of the 2013 COA will be prepared and submitted within 90 days after receipt of the final laboratory analytical data.

The next quarterly progress report (for the first quarter of 2017) will be submitted by April 30, 2017, in accordance with the time frame described in the 2013 COA.

Sincerely:

Michael H Leon

Michael H. Leon
Senior Environmental Engineer

ML:lmk
Enclosures

cc: J. Hosfield, U. S. Steel
K. Bilash, U.S. Environmental Protection Agency

United States Steel Corporation

Clairton Works

Consent Order and Agreement
Clairton Works Benzene Study
and
Third Amendment to Consent Order
Peters Creek Lagoon
Progress Report

Fourth Quarter 2016
January 2017

VEOLIA
WATER

United States Steel Corporation

Clairton Works

Consent Order and Agreement

Clairton Works Benzene Study

and

Third Amendment to Consent Order

Peters Creek Lagoon Investigation

4th Quarter 2016 Progress Report

January 26, 2017

Prepared by: Bill Kovic

James Hosfield

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SUMMARY

This is a report of the progress made between October 1, 2016 and December 31, 2016 on the various projects and monitoring programs at United States Steel Clairton Works as mandated by the Benzene Consent Order and Agreement including the Third Amendment between United States Steel Corporation and the Pennsylvania Department of Environmental Protection (PADEP). Major findings and activities at the Clairton Works during this period were:

1. The averages of the Irvin Intake benzene and phenol three-turn composite sample concentrations in the Fourth Quarter 2016 were below the trigger limits.

2. The routine monitoring of the Consent Order monitoring wells was completed with no significant changes noted from the previous quarter's analytical monitoring data. The history and present status of each monitoring well is presented in Table A-7.

3. Currently, the down-gradient Benzene Trench, installed along the bank of the Monongahela River, has very low concentrations of benzene. Based on this, MW-39 (formerly converted into a recovery well) remains best suited for monitoring groundwater quality only. Also, RW-98 is currently designated as a monitoring well and is sampled quarterly for benzene, phenols, total and free cyanide, and ammonia. Monitoring of MW-39 and RW-98 continued during the Fourth Quarter of 2016.

4. The BTX trench operated during the Fourth Quarter of 2016. An average groundwater collection rate of 133 gallons per day was reported.

5. Analyses have shown improved water quality in the Outfall 081 (004) sewer. Water from Outfall 083 is diverted to Outfall 081 to satisfy the requirements of NPDES Permit No. PA 0004472.

6. Operation of the groundwater recovery system in the River Wall Area continued throughout the Fourth Quarter of 2016. The system consists of a 4,900-gallon storage tank with secondary containment and a total-fluids recovery pump. All recovered fluids are pumped via pipeline to the Clairton Works Contaminated Wastewater Treatment Plant. Since the installation of the recovery system, evidence of a visible sheen on the river has been infrequent. Beginning January 2002, USS analyzes the tank contents instead of the water within well RW-94.

7. Wells TW-1D, TW-3 and TW-5 remain in the sampling plan and are scheduled to be monitored semi-annually for oil and grease, water level, and field measurements. However, TW-1D and TW-3 are covered by pavement and cannot be located, and TW-5 has filled with dirt and road debris. These wells cannot be sampled.

8. In accordance with the GCP-II work plan for Peters Creek Lagoon, results for the Fourth Quarter 2016 groundwater sampling are included in this submittal along with groundwater elevation measurements. Beginning January 2002, the remaining volatiles, semi-volatiles, and metals were eliminated from the scope of analyses. The wells will continue to be monitored quarterly for benzene and phenol. Also at this time, water elevations, previously monitored monthly, are measured only during months when groundwater samples are collected. Wells previously monitored for water elevations only have been removed from the schedule.

9. The Peters Creek seep collection trench and treatment plant continued to capture, process, and discharge groundwater under the NPDES permit during the Fourth Quarter of 2016.

10. RW-38 was not sampled in the Fourth Quarter 2016. This recovery well does not have a sampling port and must be sampled by bailer. However, bailers and rope are tangled around the piping system within the well and cannot be removed without disassembling the piping. The obstruction prevented sample collection from RW-38. In addition, RW-27 was not sampled in the Fourth Quarter 2016 because the recovery pump was not running during the sampling event.

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

CONSENT ORDER AND AGREEMENT CLAIRTON WORKS BENZENE STUDY PROGRESS REPORT, FOURTH QUARTER 2016

United States Steel Corporation entered into a Consent Order and Agreement with the Pennsylvania Department of Environmental Protection (PA DEP) on February 12, 1987. The most recent Consent Order and Agreement is dated October 15, 2013. The Consent Order is intended to provide a means to mitigate the unauthorized discharge of organic compounds into the Monongahela River from the United States Steel Clairton Works. This includes discharges from point sources (outfalls) and nonpoint sources (groundwater). The Consent Order requires USS to: 1) monitor the groundwater at the site; 2) investigate previously identified sources of organics; and 3) continue to investigate the sources of unauthorized discharges of organics to the Monongahela River. Reports detailing the progress of these activities are to be presented quarterly. This report is submitted pursuant to the requirements set forth in the Consent Order. It combines the groundwater monitoring results with a progress report on the investigations and remedial activities undertaken at the plant between October 1 and December 31, 2016.

The following sections detail the activities undertaken at the Clairton Works pursuant to the Consent Order. The Consent Order paragraphs corresponding to each section are shown in parentheses.

A. EER Plan [PPC Plan (Paragraph 3)]

In accordance with Paragraph 3 of the 1987 Consent Decree Order and Agreement, a Preparedness, Prevention and Contingency (PPC) Plan is to be reviewed annually and revised as required. On August 2, 1991 USS submitted an Environmental Emergency Response (EER) Plan to PA DEP. The EER Plan was a consolidation of the Preparedness, Prevention and Contingency (PPC) Plan and the Spill Prevention and Response (SPR) Plan. The EER Plan was subsequently combined with other response plans and incorporated into one document entitled, "Integrated Contingency Plan for Pollution Prevention and Emergency Response".

The latest revision of the Integrated Contingency Plan for Pollution Prevention and Emergency Response submitted to PA DEP is dated December 18, 2015. This submittal satisfies the annual review and update requirement.

B. Early Warning System (Paragraph 4)

The Early Warning System Plan requires USS to monitor the benzene and phenolics concentrations at the Irvin Intake. In addition, Outfall 038 and Peters Creek are sampled daily for internal investigation purposes.

The averages of the 3-turn composite for benzene and phenol concentrations at the Irvin Intake were less than or equal to 0.0003 mg/L and 0.005 mg/L, respectively, during the three-month period. The values of 0.0002 mg/L and 0.005 mg/L represent the detection limit for benzene and phenol, respectively. The average benzene concentration is below the drinking water standard of 0.005 mg/L and the average phenol concentration is below the 0.020 mg/L fish and aquatic life criteria and less than the 0.005 mg/L human health standard which is applied at the water supply intake. A tabulation of the monitoring data for October, November, and December 2016 is provided in Table A-1.

1. Early Warning System Annual Update

The annual update of the Early Warning System Plan for the 2016 calendar year was completed during December of 2015. The changes went into effect January 14, 2016. Control Limits applied to the Irvin Intake for Benzene (0.0006 mg/L) and Phenol (0.015 mg/L) are equal to three times the laboratory Report Limits.

2. Discussion of Additional Monitoring

In addition to the monitoring of Irvin Intake, USS also monitors Peters Creek and Outfall 038, shown schematically in Drawing W-61828, daily for benzene and phenolic concentrations. The analytical results for October, November, and December 2016 are presented in Table A-2.

Clairton Works continues its statistical process control (SPC) program above and beyond the Early Warning Program for initiating corrective actions when unusual benzene or phenol concentrations are detected at outfall 038 and Peters Creek monitoring points. Due to seasonal variations in benzene levels, USS Clairton Works has implemented seasonal trigger limits at Peters Creek. Clairton Works voluntarily uses SPC on the main branches of outfall 038. Application of SPC

techniques to the monitoring points involves calculating an Upper Control Limit (UCL) and taking action on any results that exceed this limit. The UCL is the point where a result would exceed the normal variability. If the UCL is exceeded, samples of contributory sewers are taken to isolate a plant area. The isolated plant area may then be sampled in detail so that the source can be pinpointed. Once the source is known, corrective actions are initiated. The phenol results for the Peters Creek samples collected on November 23 (0.018 mg/L), December 1 (0.007 mg/L), and December 25 (0.012 mg/L) exceeded the UCLs for November (0.013 mg/L) and December (0.006 mg/L). However, since there are no applicable contributory sewers that can be isolated, further investigation was not warranted. In November, the benzene samples collected at Outfall 038 on November 24 (0.0053 mg/L) and November 25 (0.0007 mg/L) exceeded the UCL (0.0003 mg/L). During December, the phenol samples collected from Outfall 038 on December 7 (0.032 mg/L) and December 14 (0.021 mg/L) exceeded the UCL (0.017 mg/L). Further investigation revealed that the benzene levels were influenced by Clairton Works Contaminated Wastewater Treatment Plant (CWTP) effluent that is discharged under permit. Follow-up sampling conducted for the phenol exceedances was inconclusive. Results of the additional sampling were inconsistent before returning to normal levels.

C. Regular Groundwater Monitoring (Paragraph 5)

The regular sampling of the Consent Order monitoring wells has continued according to schedule. Well location maps are presented in Appendix B. Per agreement with the PA DEP, several wells have been abandoned or replaced. In addition, wells from various groundwater investigations conducted at the site have been added to the monitoring schedule, and others have been eliminated. Changes to the original monitoring program and the classification and status of individual wells are included in Table A-7.

- Recovery Wells RW-26, RW-27 and RW-38 are scheduled for sampling on a bimonthly basis. Samples were collected from RW-26 in November during the fourth quarter 2016. RW-27 was not sampled in the fourth quarter 2016 because the recovery pump was not operating during the sampling events. RW-38 does not have a sampling port and must be sampled with a bailer. RW-38 was not sampled during the fourth quarter 2016 because bailers and rope are tangled around the piping within the well and cannot be removed without disassembling the piping.

- RW-94 pumps to a tank and is subsequently pumped via pipeline to the Contaminated Water Treatment Plant. Beginning January 2002, USS samples and analyzes the tank contents instead of the well water for RW-94. Sample was collected on December 13, 2016.

- Monitoring wells P-1-I, P-4-I and P-8-I, part of the Peters Creek Lagoon Investigation, were added to the monitoring program during the August 1995 sampling period and are currently sampled quarterly for benzene and phenol. They were sampled in October during the fourth quarter 2016.

- A groundwater investigation was initiated in August 1995 in the Motor Repair Shop area. Four of the original eight wells (TW-1D, TW-3, TW-5 and TW-10) were added to the monthly schedule and were sampled for benzene, phenol, oil and grease, water level, and field measurements. Beginning in January 1998, these wells were sampled on a bimonthly basis. TW-10 is covered by pavement and cannot be sampled. It was removed from the monitoring schedule in January 2002. The remaining three wells are currently part of the monitoring scope and are scheduled to be sampled semi-annually for oil and grease, water level, and field measurements, but cannot be sampled. TW-1D and TW-3 are covered by pavement and cannot be located. TW-5 has filled with dirt and road debris and cannot be sampled. These wells were scheduled for sampling during the fourth quarter 2016.

- RW-98 (well No. 7 area) was added to the monthly monitoring schedule effective November 1996. Beginning January 2002, RW-98 is monitored quarterly and the samples analyzed for benzene, phenol, total and free cyanide, and ammonia.

1. Results of Groundwater Monitoring

Tables A-3, A-4, and A-5 present the results of the bimonthly, quarterly, and semi-annual sampling completed in October, November, and December 2016, respectively. Table A-6 presents the results of all Quality Control Samples collected during the Fourth Quarter of 2016.

2. *Well Classification and Status*

Table A-7 summarizes the present status of each well and its designation as a monitoring, recovery, or temporary well.

D. *Control Measures (Paragraph 6)*

The Consent Order specifies that USS continue to implement various control measures for point source discharges. The current status of these measures is discussed below:

1. USS maintains a boom at the mouth of Peters Creek to prevent off-site migration of hydrocarbons. In the Fourth Quarter of 2010, USS began utilizing 2 sets of absorbent and containment booms at the mouth of Peters Creek so that in the event of one boom malfunctioning, another is still in place.

2. The abandoned leg of the Outfall 084 (005) sewer is currently blocked. The material accumulating within the blocked portion of the sewer had been pumped to the Clairton Works Contaminated Wastewater Treatment Plant (CWTP) by Koppers Industries (formerly Aristech Chemical Corporation).

3. All flow from Outfall 005 (014) is being directed by Koppers Industries to the Clairton Works CWTP.

4. Koppers Industries continues to pump the dry weather flow at the Mendelssohn sewer to the Clairton Works CWTP during normal operations.

E. *Keystone Area (MW-7) & Benzene Storage Area (MW-10) Groundwater Studies (Paragraph 7)*

MW-7 and MW-10 are not monitored under the consent order and were abandoned in 1991 and 1990, respectively. U.S. Steel voluntarily initiated remediation in the Benzene Storage Area by converting former monitoring well MW-39 into a product recovery well. USS determined that this well, originally designed and installed as a monitoring well, is not currently capable of functioning as a recovery well, and is best suited for monitoring groundwater quality only, and therefore changed the well designation back to MW-39. Also, U.S. Steel voluntarily installed an additional well in the Keystone Area.

Installation of well RW-98 was completed in November 1996. This well was not piped for recovery but will continue to be monitored per the established schedule.

F. BTX Plume (Paragraph 9)

The BTX trench operated during the Fourth Quarter of 2016. An average groundwater collection rate of 133 gallons per day was reported. A performance summary for the trench is included in Table A-8.

G. Additional Investigations and Remedial Action (Paragraph 10)

The Consent Order requires that USS continue its investigation into the causes of unauthorized discharges of organics from the Clairton Works and subsequently remediate the causes of such discharges. USS work during the Fourth Quarter of 2016 in this regard may be divided into eight general areas:

1. Outfall 081 (004) and 038 Sewer Diversion Project
2. Peters Creek Lagoon Study
3. River Wall Oil Seep Study
4. Peters Creek Arch Monitoring
5. Underground Storage Tank No. 002
6. Recovery Well RW-39
7. Motor Repair Shop Soil and Groundwater Investigation
8. Well RW-98

Work in each area is discussed in the following subsections.

1. Outfall 081 (004) and 038 Sewer Rehabilitation Project

U.S. Steel continues to observe the Outfall 081 sewer. Analyses have shown an improved water quality in this sewer. During the fourth quarter 1996, water from Outfall 083 was permanently re-routed to Outfall 081 to satisfy the requirements of NPDES Permit No. PA0004472. Outfall 081 was extended to allow for discharge into the Monongahela River.

2. *Peters Creek Lagoon Investigation*

As specified by the Second Amendment to the Consent Order and Agreement between USS and the Pennsylvania Department of Environmental Protection, this quarterly progress report summarizes the activities performed at Peters Creek Lagoon during the Fourth Quarter of 2016. The First Amendment describes a series of required investigations and activities in the Peters Creek Area concerning three separate programs: (1) the recycle/reuse of the coke by-product material in the lagoon, (2) the closure of Peters Creek Lagoon, and (3) the delineation and remediation of groundwater adversely affected by Peters Creek Lagoon. In accordance with the GCP-II Work Plan, results for the Fourth Quarter 2016 sampling event are included in this report and are presented in Appendix A in Table A-9.

Fourth Quarter Activities

Groundwater Cleanup Plan (GCP)

The Fourth Quarter groundwater sampling events for the GCP monitoring were conducted on October 5 and 6, and November 9 and 10, 2016.

Significant aspects of these activities are summarized below.

Quarterly Groundwater Monitoring

Modifications to the monitoring schedule and scope of analyses were implemented in January 2002. Groundwater samples collected from monitoring wells OW-1, OW-2, OW-3, MW-101B, MW-102B, MW-103A, MW-103B, MW-104B, TW-69, TW-70, TW-71, P-1-I, P-4-I, and P-8-I are no longer analyzed for selected volatiles, semi-volatiles, and metals. The wells are currently monitored for benzene, phenol, and water level. All wells are monitored quarterly, except wells OW-1, OW-2, and OW-3, which are sampled bimonthly. Laboratory results of the Fourth Quarter 2016 monitoring events are included in Table A-9.

Monthly Water Level Measurements

Historically, static water elevations of selected monitoring wells and piezometers were collected monthly for the shallow and bedrock water-bearing zones. The monthly measurement of water levels continued through January 2002. Currently, water levels at MW-16, MW-17, MW-101B, MW-102B, MW-103A, MW-103B, MW-104B, OW-1, OW-2, OW-3, OW-4, TW-69, TW-70, TW-71, P-1-I, P-4-I, and P-8-I are monitored only during the months when groundwater samples are collected. A summary tabulation of data extending from April 2015 through December 2016 is presented in Table A-10.

Closure Plan

The stabilization of the contents and contouring of the stabilized material to preload the lagoon to mimic the final cap configuration was completed during the second quarter 2002. The installation of the interim cap liners, hydraulic control system, and stormwater systems were also completed at that time, and the final phase of the permanent cap installation was completed in October 2003. The system isolates the lagoon from the environment. Groundwater levels continued to be monitored and the Peters Creek seep collection trench and treatment plant continued to capture, process, and discharge groundwater.

3. Oil Seep Investigation

Field activities for the River Wall Oil Seep Investigation were completed in September 1991. A report on the findings of the investigation was submitted to the PA DEP in March 1992, and a letter of comment on the report was received by U.S. Steel on June 4, 1992. One recovery well (RW-97) and three temporary observation wells (TW-94, TW-95 and TW-96) were installed in the vicinity of the river wall as per PA DEP comments.

A groundwater recovery system was put into operation in RW-97 in September 1993. After the groundwater recovery system was put into operation, there were several instances of an oily substance visible on the river. The groundwater recovered from RW-97 was not oily, but product was detected in TW-94 which is several feet away. It was subsequently discovered that the recovery well pump in RW-97 was not functioning and that the viscosity of the product in TW-94 was greater than that of product layers previously observed.

During the fourth quarter 1994, an investigation was conducted to determine what adaptations were necessary to the system. As a result, TW-94 was converted to a recovery well (RW-94) and RW-97 was abandoned. The viscosity and appearance of the material currently being recovered is more consistent with the material that had been visible on the river. The fluid is pumped and transported via pipeline to the Clairton Works Contaminated Water Treatment Plant. USS personnel monitor the river for visible sheens. After the implementation of the pumping system in RW-94, the river visibly improved. Beginning January 2002, USS analyzes the tank contents instead of the well water.

4. *Peters Creek Arch Monitoring*

Inspection and repairs of the arch joints were conducted between 1992 and 2002. Visual inspections revealed numerous leaking joints. Grouting of the major leaks began in May 1999 and was completed in the third quarter 2002.

5. *Underground Storage Tank (UST) No. 002*

Underground Storage Tank No. 002, located adjacent to the Crane Repair Shop, was found to be leaking when it was removed on September 24, 1992. The PA DEP was immediately notified of the leak. A recovery well was installed in the tank excavation and the excavation was backfilled.

A monitoring program consisting of 14 test wells was implemented in an effort to determine the extent of the plume. Contamination in downgradient wells was observed. Nine of these wells were converted into temporary monitoring wells. These temporary monitoring wells were added to the monthly well sampling program as required by the Benzene Consent Order started in August 1993 and completed in July 1994. Two wells, CYMW-2 and CYMW-5 were included in the well sampling schedule for benzene and phenol on a semiannual basis. Beginning January 2002, monitoring of CYMW-2 and CYMW-5 was discontinued due to low concentrations.

6. *Monitoring Well MW-39*

USS voluntarily initiated remediation in the Benzene Storage Area by converting former monitoring well MW-39 into a product recovery well in September 1993. USS re-evaluated the status of RW-39 (currently MW-39) and has determined that this well, originally designed and installed as a monitoring well, is not currently capable of functioning as a recovery well. Currently, the down-gradient Benzene Trench, installed along the bank of the Monongahela River, has very low concentrations of benzene. Based on this, USS has determined that RW-39 is best suited as a well for monitoring groundwater quality only. In addition, the Department has indicated that a new Consent Order will be issued requiring a site-wide groundwater characterization. This characterization would identify the need for, and optimum locations for the placement of groundwater removal wells / systems. The status of MW-39 will be re-evaluated when a new Consent Order is finalized.

7. *Motor Repair Shop Soil and Groundwater Investigation*

On November 19, 1993 a discovery of petroleum hydrocarbons and chlorinated hydrocarbons within the soil and groundwater was made at the Motor Repair Shop. The discovery was made when a portion of the area was excavated to repair a city water line. A final work plan for investigating the extent of contamination was approved in September 1994. In July 1995, a report detailing the results of the investigation and plans for additional activities were forwarded to the PA DEP. During the fourth quarter 1996 a second excavation was conducted to repair a city water line. During the excavation, contaminated groundwater was encountered. During the fourth quarter (August) 1995, groundwater monitoring was initiated in this area. Eight monitoring wells (TW-1S, TW-1D, TW-3, TW-4, TW-5, TW-7, TW-9 and TW-10) were included in this investigation and are identified in Figure 2 (Appendix B). During September 1996, after completion of the initial twelve-month investigation, monitoring wells TW-1D, TW-3, TW-5 and TW-10 were added to the monthly schedule. The remaining wells (TW-1S, TW-4, TW-7 and TW-9) did not normally contain sufficient volumes for sampling and were eliminated from the schedule at this time. In January 1998, the monitoring frequency of wells TW-1D, TW-3, TW-5 and TW-10 was changed to bimonthly and the samples

analyzed for benzene, phenol and oil and grease. Being covered by pavement and inaccessible, TW-10 was removed from the monitoring plan in January 2002. Also at that time, benzene and phenol were eliminated from the analytical requirements and the sampling frequency of the remaining wells was reduced. Wells TW-1D, TW-3, and TW-5 are currently scheduled to be monitored semi-annually and the samples analyzed for oil and grease, water level, and field measurements. However, these three wells can no longer be sampled. TW-1D and TW-3 are covered by pavement and cannot be located. TW-5 has filled with dirt and road debris. These wells were scheduled for sampling during the Fourth Quarter of 2016.

8. Well RW-98

Well RW-98 was installed in the Keystone Area near TW-76 and TW-77. This action is voluntary. Monitoring of the well began during November 1996 and continued during the Fourth Quarter of 2016. This well is not piped for recovery but will continue to be monitored. Beginning January 2002, the monitoring frequency of RW-98 was changed from monthly to quarterly, and the samples are analyzed for benzene, phenol, free and total cyanide, and ammonia.

APPENDIX A

TABLES

TABLE NO.

TABLE A-1

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

	IRVIN INTAKE, mg/l	
Date	Benzene	Phenol
UCL	0.0006	0.015
10/1/16	< 0.0002	< 0.005
10/2/16	< 0.0002	< 0.005
10/3/16	< 0.0002	< 0.005
10/4/16	< 0.0002	< 0.005
10/5/16	< 0.0002	< 0.005
10/6/16	< 0.0002	< 0.005
10/7/16	< 0.0002	< 0.005
10/8/16	< 0.0002	< 0.005
10/9/16	< 0.0002	< 0.005
10/10/16	< 0.0002	< 0.005
10/11/16	< 0.0002	< 0.005
10/12/16	< 0.0002	< 0.005
10/13/16	< 0.0002	< 0.005
10/14/16	< 0.0002	< 0.005
10/15/16	< 0.0002	< 0.005
10/16/16	< 0.0002	< 0.005
10/17/16	< 0.0002	< 0.005
10/18/16	< 0.0002	< 0.005
10/19/16	< 0.0002	< 0.005
10/20/16	< 0.0002	< 0.005
10/21/16	< 0.0002	< 0.005
10/22/16	< 0.0002	< 0.005
10/23/16	< 0.0002	< 0.005
10/24/16	< 0.0002	< 0.005
10/25/16	< 0.0002	< 0.005
10/26/16	< 0.0002	< 0.005
10/27/16	< 0.0002	< 0.005
10/28/16	< 0.0002	< 0.005
10/29/16	< 0.0002	< 0.005
10/30/16	< 0.0002	< 0.005
10/31/16	< 0.0002	< 0.005

TABLE A-1

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

Date	IRVIN INTAKE, mg/l	
	Benzene	Phenol
UCL	0.0006	0.015
11/1/16	< 0.0002	< 0.005
11/2/16	< 0.0002	< 0.005
11/3/16	< 0.0002	< 0.005
11/4/16	< 0.0002	< 0.005
11/5/16	< 0.0002	< 0.005
11/6/16	< 0.0002	< 0.005
11/7/16	< 0.0002	< 0.005
11/8/16	< 0.0002	< 0.005
11/9/16	< 0.0002	< 0.005
11/10/16	< 0.0002	< 0.005
11/11/16	< 0.0002	< 0.005
11/12/16	< 0.0002	< 0.005
11/13/16	< 0.0002	< 0.005
11/14/16	< 0.0002	< 0.005
11/15/16	< 0.0002	< 0.005
11/16/16	< 0.0002	< 0.005
11/17/16	< 0.0002	< 0.005
11/18/16	< 0.0002	< 0.005
11/19/16	< 0.0002	< 0.005
11/20/16	< 0.0002	< 0.005
11/21/16	< 0.0002	< 0.005
11/22/16	< 0.0002	< 0.005
11/23/16	< 0.0002	< 0.005
11/24/16	< 0.0002	< 0.005
11/25/16	< 0.0002	< 0.005
11/26/16	< 0.0002	< 0.005
11/27/16	< 0.0002	< 0.005
11/28/16	< 0.0002	< 0.005
11/29/16	< 0.0002	< 0.005
11/30/16	0.0002	< 0.005

TABLE A-1

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

	IRVIN INTAKE, mg/l			
Date	Benzene		Phenol	
UCL		0.0006		0.015
12/1/16	<	0.0002	<	0.005
12/2/16	<	0.0002	<	0.005
12/3/16	<	0.0002	<	0.005
12/4/16	<	0.0002	<	0.005
12/5/16	<	0.0002	<	0.005
12/6/16	<	0.0002	<	0.005
12/7/16	<	0.0002		0.000
12/8/16	<	0.0002	<	0.005
12/9/16	<	0.0002	<	0.005
12/10/16	<	0.0002	<	0.005
12/11/16	<	0.0002	<	0.005
12/12/16	<	0.0002	<	0.005
12/13/16	<	0.0002	<	0.005
12/14/16	<	0.0002	<	0.005
12/15/16	<	0.0002	<	0.005
12/16/16	<	0.0002	<	0.005
12/17/16	<	0.0002	<	0.005
12/18/16	<	0.0002	<	0.005
12/19/16	<	0.0002	<	0.005
12/20/16	<	0.0002		N/A
12/21/16	<	0.0002	<	0.005
12/22/16	<	0.0002	<	0.005
12/23/16	<	0.0002	<	0.005
12/24/16	<	0.0002	<	0.005
12/25/16	<	0.0002	<	0.005
12/26/16	<	0.0002	<	0.005
12/27/16	<	0.0002	<	0.005
12/28/16		0.0002	<	0.005
12/29/16	<	0.0002	<	0.005
12/30/16	<	0.0002	<	0.005
12/31/16	<	0.0002	<	0.005
Average		0.0002		0.005

TABLE A-2

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

	PETERS CREEK, mg/l			OUTFALL 038, mg/l		
Date	Benzene		Phenol	Benzene		Phenol
UCL	0.0064		0.008	0.0005		0.005
10/1/16	0.0007	<	0.005	< 0.0002	<	0.005
10/2/16	0.0006	<	0.005	< 0.0002	<	0.005
10/3/16	0.0004	<	0.005	0.0002	<	0.005
10/4/16	0.0011	<	0.005	< 0.0002	<	0.005
10/5/16	0.0008	<	0.005	< 0.0002	<	0.005
10/6/16	0.0007	<	0.005	< 0.0002	<	0.005
10/7/16	0.0005	<	0.005	< 0.0002	<	0.005
10/8/16	0.0006	<	0.005	< 0.0002	<	0.005
10/9/16	0.0010	<	0.005	< 0.0002	<	0.005
10/10/16	0.0006	<	0.005	< 0.0002	<	0.005
10/11/16	0.0009	<	0.005	< 0.0002	<	0.005
10/12/16	0.0009	<	0.005	< 0.0002	<	0.005
10/13/16	0.0011	<	0.005	< 0.0002	<	0.005
10/14/16	0.0010	<	0.005	< 0.0002	<	0.005
10/15/16	0.0009	<	0.005	< 0.0002	<	0.005
10/16/16	0.0006	<	0.005	< 0.0002	<	0.005
10/17/16	N/A	<	0.005	< 0.0002	<	0.005
10/18/16	0.0006		N/A	< 0.0002	<	0.005
10/19/16	0.0013		0.006	< 0.0002	<	0.005
10/20/16	0.0011	<	0.005	< 0.0002	<	0.005
10/21/16	0.0011	<	0.005	0.0003	<	0.005
10/22/16	0.0006	<	0.005	< 0.0002	<	0.005
10/23/16	0.0003	<	0.005	< 0.0002	<	0.005
10/24/16	0.0004		0.005	< 0.0002	<	0.005
10/25/16	0.0011	<	0.005	< 0.0002	<	0.005
10/26/16	0.0009	<	0.005	< 0.0002	<	0.005
10/27/16	0.0016	<	0.005	< 0.0002	<	0.005
10/28/16	0.0011	<	0.005	< 0.0002	<	0.005
10/29/16	0.0016	<	0.005	< 0.0002	<	0.005
10/30/16	0.0009	<	0.005	0.0002		0.005
10/31/16	0.0018	<	0.005	< 0.0002	<	0.005

TABLE A-2

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

	PETERS CREEK, mg/l				OUTFALL 038, mg/l			
Date	Benzene		Phenol		Benzene		Phenol	
UCL	0.0066		0.013		0.0003		0.008	
11/1/16	0.0012	<	0.005	<	0.0002	<	0.005	
11/2/16	0.0012	<	0.005	<	0.0002		0.005	
11/3/16	0.0012	<	0.005	<	0.0002	<	0.005	
11/4/16	0.0006	<	0.005	<	0.0002		0.005	
11/5/16	0.0016	<	0.005	<	0.0002	<	0.005	
11/6/16	0.0009	<	0.005	<	0.0002	<	0.005	
11/7/16	0.0006	<	0.005	<	0.0002	<	0.005	
11/8/16	0.0007	<	0.005		0.0009	<	0.005	
11/9/16	0.0019	<	0.005	<	0.0002	<	0.005	
11/10/16	0.0024	<	0.005	<	0.0002	<	0.005	
11/11/16	0.0012	<	0.005	<	0.0002	<	0.005	
11/12/16	0.0009	<	0.005	<	0.0002	<	0.005	
11/13/16	0.0005	<	0.005	<	0.0002	<	0.005	
11/14/16	0.0008	<	0.005	<	0.0002		0.008	
11/15/16	0.0008	<	0.005	<	0.0002	<	0.005	
11/16/16	0.0015	<	0.005	<	0.0002		0.005	
11/17/16	0.0007	<	0.005	<	0.0002	<	0.005	
11/18/16	0.0008	<	0.005	<	0.0002		0.006	
11/19/16	0.0006	<	0.005	<	0.0002	<	0.005	
11/20/16	0.0013	<	0.005	<	0.0002	<	0.005	
11/21/16	0.0006	<	0.005	<	0.0002	<	0.005	
11/22/16	0.0016		0.006	<	0.0002		0.005	
11/23/16	0.0011		0.018	<	0.0002		0.005	
11/24/16	0.0011		0.005		0.0053	<	0.005	
11/25/16	0.0011	<	0.005		0.0007	<	0.005	
11/26/16	0.0010	<	0.005	<	0.0002	<	0.005	
11/27/16	0.0007	<	0.005	<	0.0002	<	0.005	
11/28/16	< 0.0002	<	0.005	<	0.0002	<	0.005	
11/29/16	0.0005	<	0.005	<	0.0002	<	0.005	
11/30/16	0.0022	<	0.005	<	0.0002	<	0.005	

TABLE A-2

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

USS CLAIRTON EARLY WARNING PROGRAM
WATER DATA SUMMARY
FOURTH QUARTER 2016

	PETERS CREEK, mg/l				OUTFALL 038, mg/l			
Date	Benzene		Phenol		Benzene		Phenol	
UCL	0.0051		0.006		0.0004		0.017	
12/1/16	0.0017		0.007		0.0002		0.005	
12/2/16	0.0011	<	0.005		0.0003	<	0.005	
12/3/16	0.0010	<	0.005		0.0002	<	0.005	
12/4/16	0.0005	<	0.005	<	0.0002	<	0.005	
12/5/16	0.0012	<	0.005	<	0.0002	<	0.005	
12/6/16	0.0006	<	0.005	<	0.0002	<	0.005	
12/7/16	0.0016		0.005		0.0003		0.032	
12/8/16	0.0005	<	0.005	<	0.0002		0.005	
12/9/16	0.0004	<	0.005	<	0.0002		0.005	
12/10/16	0.0005	<	0.005	<	0.0002	<	0.005	
12/11/16	0.0004	<	0.005	<	0.0002		0.006	
12/12/16	0.0008	<	0.005	<	0.0002	<	0.005	
12/13/16	0.0007	<	0.005	<	0.0002	<	0.005	
12/14/16	0.0012	<	0.005		0.0003		0.021	
12/15/16	0.0008	<	0.005	<	0.0002	<	0.005	
12/16/16	0.0005	<	0.005	<	0.0002	<	0.005	
12/17/16	0.0013	<	0.005	<	0.0002		0.005	
12/18/16	0.0011		0.006		0.0004		0.008	
12/19/16	0.0003	<	0.005	<	0.0002	<	0.005	
12/20/16	0.0005	<	0.005	<	0.0002		0.005	
12/21/16	0.0004	<	0.005	<	0.0002		0.005	
12/22/16	0.0005	<	0.005	<	0.0002		0.005	
12/23/16	0.0004	<	0.005	<	0.0002		0.005	
12/24/16	0.0003	<	0.005	<	0.0002	<	0.005	
12/25/16	0.0002		0.012	<	0.0002	<	0.005	
12/26/16	0.0005	<	0.005	<	0.0002	<	0.005	
12/27/16	0.0005	<	0.005		0.0002	<	0.005	
12/28/16	0.0005	<	0.005	<	0.0002	<	0.005	
12/29/16	0.0007	<	0.005	<	0.0002	<	0.005	
12/30/16	0.0006	<	0.005	<	0.0002	<	0.005	
12/31/16	0.0003	<	0.005	<	0.0002	<	0.005	
Average	0.0009		0.0052		0.0003		0.006	

TABLE A-3

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

GROUNDWATER SAMPLING RESULTS
FOURTH QUARTER 2016
OCTOBER SAMPLING ROUND

Well	Location	Date Sampled	Water Elevation (ft MSL)	Benzene (mg/l)	Phenolics (mg/l)	Free Cyanide (mg/l)	Total Cyanide (mg/l)	Ammonia Nitrogen (mg/l)	Oil & Grease (mg/l)
MW-1	Steel Works	10/06/16	748.51	< 0.0002	< 0.005				
MW-2	Steel Works	10/06/16	742.47	< 0.0002	< 0.005				
MW-3	Steel Works	10/06/16	726.25	< 0.0002	< 0.005				
MW-4	Steel Works	10/06/16	730.70	< 0.0002	< 0.005				
MW-5	7 Battery Area	10/06/16	730.09	0.0003	< 0.005				
MW-8	Second Unit Coking	10/06/16	744.13	0.0005	< 0.005				
MW-14	Coal Storage	10/06/16	751.46	< 0.0002	< 0.005				
MW-15	Coal Storage	10/06/16	725.66	< 0.0002	< 0.005				
MW-17	Peters Creek Coke Yard	10/06/16	737.99	0.248	0.041				
MW-18	Peters Creek Coke Yard	10/06/16	736.03	0.0019	< 0.005				
MW-19	Peters Creek Coke Yard	10/06/16	739.04	< 0.0002	< 0.005				
MW-101B	Peters Creek Coke Yard	10/06/16	728.80	< 0.0002	0.015				
MW-102B	Peters Creek Coke Yard	10/06/16	731.25	0.0005	0.005				
MW-104B	Peters Creek Coke Yard	10/06/16	734.87	0.0065	< 0.005				
TW-69	Peters Creek Coke Yard	10/06/16	732.90	0.0010	< 0.005				
TW-71	Peters Creek Coke Yard	10/06/16	734.98	3.02	0.077				
P-1-I	Peters Creek Coke Yard	10/06/16	728.88	0.0010	0.012				
P-4-I	Peters Creek Coke Yard	10/06/16	731.82	0.0005	0.006				
P-8-I	Peters Creek Coke Yard	10/06/16	728.34	< 0.0002	< 0.005				

Groundwater samples collected by Veolia North America - Industrial Business Group.

Laboratory analyses performed by USS Clairton Works Laboratory.

TABLE A-4

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

GROUNDWATER SAMPLING RESULTS
FOURTH QUARTER 2016
NOVEMBER SAMPLING ROUND

Well	Location	Date Sampled	Water Elevation (ft MSL)	Benzene (mg/l)	Phenolics (mg/l)	Free Cyanide (mg/l)	Total Cyanide (mg/l)	Ammonia Nitrogen (mg/l)	Oil & Grease (mg/l)
MW-16	Peters Creek Coke Yard	11/10/16	704.66	1.59	0.034				
MW-29	BTX Plant	11/10/16	733.64	0.0032	< 0.005				
MW-30	Tar Plant	11/10/16	726.1	0.0015	< 0.005				
MW-31	BTX Plant	11/10/16	735.93	24.1	0.363				
MW-32	Tar Plant	11/10/16	751.93	0.0002	< 0.005				
MW-33	Tar Plant	11/10/16	744.28	0.0029	< 0.005				
MW-34	Tar Plant	11/10/16	747.21	0.0115	0.017				
MW-37A	Tar Plant	11/10/16	743.77	0.0259	0.026				
MW-39	BTX Plant	11/10/16	*	338	72.8				
MW-40	BTX Plant	11/10/16	**	NS	NS				
MW-41	BTX Plant	11/10/16	*	< 0.0002	< 0.005				
OW-1	Peters Creek Coke Yard	11/10/16	739.24	39.0	5.62				
OW-2	Peters Creek Coke Yard	11/10/16	731.86	1.51	0.361				
OW-3	Peters Creek Coke Yard	11/10/16	735.65	1.97	0.017				
OW-4	Peters Creek Coke Yard	11/10/16	735.86	5.98	1.09				
RW-26	Tar Plant	11/10/16	Recovery Well	14.4	9.07				
RW-27	Tar Plant	11/10/16	Recovery Well	NS	NS				
RW-38	Tar Plant	11/10/16	Recovery Well	NS	NS				
RW-98	Keystone Area	11/10/16	**	1.27	0.019	0.141	19.5	1.3	
TW-53	BTX Plant	11/10/16	*	0.473	0.019				
TW-55	Keystone Area	11/10/16	742.99	18.1	4.55				
TW-1D	Motor Repair Shop	11/10/16	**						NS
TW-3	Motor Repair Shop	11/10/16	**						NS
TW-5	Motor Repair Shop	11/10/16	**						NS
MW-103A	Peters Creek Coke Yard	11/10/16	736.64	4.50	0.318				
MW-103B	Peters Creek Coke Yard	11/10/16	731.92	0.515	0.041				
TW-70	Peters Creek Coke Yard	11/10/16	733.74	0.0143	0.015				
RW-94	River Wall Storage Tank	12/13/16	Recovery Well	< 0.0002					

Groundwater Samples Collected by Veolia Water North America Operating Services

Laboratory analyses performed by USS Clairton Works Laboratory.

* - Top of Casing Elevation not available

** - Site conditions prohibited obtaining water level

NS - Well MW-40 was destroyed; Could not sample RW-38 due to bailers stuck in well; RW-27 pump was not operating; TW-1D and TW-3 are paved over; TW-5 is filled with dirt.

TABLE A-5

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

GROUNDWATER SAMPLING RESULTS
FOURTH QUARTER 2016
DECEMBER SAMPLING ROUND

Well	Location	Date Sampled	Water Elevation (ft MSL)	Benzene (mg/l)	Phenolics (mg/l)	Free Cyanide (mg/l)	Total Cyanide (mg/l)	Ammonia Nitrogen (mg/l)	Oil & Grease (mg/l)

IN ACCORDANCE WITH THE USS CLAIRTON WORKS GROUNDWATER MONITORING SCHEDULE, SAMPLING WAS NOT CONDUCTED DURING DECEMBER.

TABLE A-6

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

QUALITY CONTROL SAMPLES
FOURTH QUARTER 2016

Sample Type	Date Sampled	Benzene (mg/l)	Phenolics (mg/l)
Trip Blank	10/06/16	< 0.0002	< 0.005
Field Blank	10/06/16	< 0.0002	< 0.005
Trip Blank	11/10/16	< 0.0002	< 0.005
Field Blank	11/10/16	< 0.0002	< 0.005
Trip Blank	December	No Sample	No Sample
Field Blank	December	No Sample	No Sample

Groundwater Samples Collected by Veolia Water North America Operating Services.

Laboratory analyses completed by USS, Clairton Works Laboratory.

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
MW-1		11/17/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-2		11/16/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-3		11/21/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-4		11/15/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-5		12/05/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-6		11/29/79	Phenol and Cyanide Study, 1981	Destroyed (1)
MW-7	TW-7	11/30/79	Phenol and Cyanide Study, 1981	Not monitored under Consent Order; abandoned 6/20/91
MW-8		11/11/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-9		11/09/79	Phenol and Cyanide Study, 1981	Destroyed (1)
MW-10	TW-10	12/05/79	Phenol and Cyanide Study, 1981	Not monitored under Consent Order; abandoned 4/17/90
MW-11		11/05/79	Phenol and Cyanide Study, 1981	Consent Order, bimonthly monitoring; abandoned 1/7/91
MW-12		10/31/79	Phenol and Cyanide Study, 1981	Not selected by PaDER for Consent Order Monitoring (2)
MW-13		12/04/79	Phenol and Cyanide Study, 1981	Destroyed (1)
MW-13A		12/10/79	Phenol and Cyanide Study, 1981	Destroyed (1)
MW-14		11/01/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-15		11/02/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-16		12/11/79	Phenol and Cyanide Study, 1981	Consent Order, bimonthly monitoring
MW-17		10/31/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-18		10/30/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-19		10/29/79	Phenol and Cyanide Study, 1981	Consent Order, quarterly monitoring
MW-20		10/30/79	Phenol and Cyanide Study, 1981	Destroyed (1)
MW-21		11/07/79	Phenol and Cyanide Study, 1981	Consent Order; bimonthly monitoring, abandoned 11/25/87
MW-22		unknown	Construction Boring for DU-1 Substation	Not selected by PaDER for Consent Order
MW-23		04/19/85	Tarben Plant Project, 1985 (GMI)	Consent Order, bimonthly monitoring, abandoned 6/23/91 and replaced with new well MW-23A
MW-23A		06/23/91	Consent Order Well Replacement	Monitored in accordance with Paragraph 5(c) of the Consent Order and Agreement for one year, August 1991 through July 1992; Added to bimonthly monitoring schedule, Third Quarter 1992 Removed from monitoring schedule May 2013.

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
MW-24		04/17/85	Tarben Plant Project, 1985 (GMI)	Consent Order, bimonthly monitoring-buried; abandoned 6/8/88
MW-25		04/18/85	Tarben Plant Project, 1985 (GMI)	Consent Order, bimonthly monitoring-obstructed; abandoned 6/28/88
RW-26		03/85	Tarben Plant Project, 1985 (GMI)	Consent Order, bimonthly monitoring - recovery well
RW-27		03/85	Tarben Plant Project, 1985 (GMI)	Consent Order, bimonthly monitoring - recovery well
MW-28		07/31/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring - dissolved casing; abandoned 6/6/88
MW-29		03/30/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-30		07/29/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-31		08/02/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-32		08/01/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-33		07/26/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-34		08/05/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring
MW-36		08/06/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring - water level reading only effective 1/01; monitoring discontinued 1/24/02
MW-37		08/09/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring-dissolved casing; abandoned 1/11/91 and replaced with new well MW-37A
MW-37A		01/11/91	Consent Order Well Replacement	Monitored in accordance with Paragraph 5(e) of the Consent Order and Agreement for one year, January through December 1992; Added to bimonthly monitoring schedule, First Quarter 1992
RW-38		08/16/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring - recovery well
MW-39		08/12/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring, no longer a recovery well
MW-40		08/14/85	Clairton Works Study, 1985	Consent Order, bimonthly monitoring; Destroyed first quarter 2005
MW-41		01/06/85	Recovery Well No. 41 Study, 1987	Consent Order, bimonthly monitoring, no longer a recovery well
OW-1		03/25/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring
OW-2		04/04/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring
OW-3		04/09/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring
OW-4		04/12/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
RW-1		03/26/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well, abandoned
RW-1A		06/95	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well; monitoring discontinued 1/24/02
RW-2		03/27/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well, abandoned
RW-2A		06/95	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well; monitoring discontinued 1/24/02
RW-3		04/01/85	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well, abandoned
RW-3A		04/96	*Hydrogeo. Assess., Peters Creek Lagoon	Consent Order, bimonthly monitoring - recovery well; monitoring discontinued 1/24/02
TB-43	TW-43	05/12/87	Outfall 009 Contamination Study	Not monitored under consent order (4)
TB-44	TW-44	05/14/87	Outfall 009 Contamination Study	Destroyed (4)
TB-45	TW-45	05/13/87	Outfall 009 Contamination Study	Not monitored under Consent Order (4)
TB-46	TW-46	05/14/87	Outfall 009 Contamination Study	Not monitored under Consent Order (4)
TB-47	TW-47	05/22/87	Outfall 009 Contamination Study	Not monitored under Consent Order (4)
TB-48	TW-48	06/07/87	Outfall 009 Contamination Study	Destroyed (4)
RB-1		12/20/85	Interceptor Trench Investigation (GMI)	Not monitored under Consent Order (4)
RB-2		12/21/85	Interceptor Trench Investigation (GMI)	Not monitored under Consent Order (4)
RB-3		12/21/85	Interceptor Trench Investigation (GMI)	Not monitored under Consent Order (4)
RB-4		12/21/85	Interceptor Trench Investigation (GMI)	Not monitored under Consent Order (4)
RB-5		12/22/85	Interceptor Trench Investigation (GMI)	Not monitored under Consent Order (4)
TW-49		02/04/88	Keystone Groundwater Study	Temporary (5), well damaged in April 1991, abondoned 6/21/91
TW-50		01/06/88	Keystone Groundwater Study	Temporary (5)
TW-51		01/07/88	Keystone Groundwater Study	Temporary (5)
TW-52		01/08/88	Benzene Storage Area (Well-10) Study	Added to quarterly monitoring schedule, First Quarter 1992; low concentrations of analytes, monitoring discontinued 1/24/02
TW-53		01/11/88	Benzene Storage Area (Well-10) Study	Added to quarterly monitoring schedule, First Quarter 1992; voluntary monitoring 1/24/02

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
TW-54		12/23/87	Keystone Groundwater Study (Well-7) Study	Added to quarterly monitoring schedule, First Quarter 1992; low concentrations of analytes, monitoring discontinued 1/24/02
TW-55		12/24/87	Keystone Groundwater Study (Well-7) Study	Added to quarterly monitoring schedule, First Quarter 1992; voluntary monitoring 1/24/02
TW-56		12/31/87	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-57		12/31/87	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-58		01/20/88	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-59		01/18/88	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-60		01/13/88	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-61		01/14/88	Keystone Groundwater Study (Well-7) Study	Temporary (5)
TW-62		09/03/87	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-63		01/12/88	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-64		01/12/88	Benzene Storage Area (Well-10) Study	Destroyed
TW-65		03/29/88	BTX Plume Northern Extent Study	Temporary; well damaged in November 1990; abandoned 1/14/91 and replaced with new well MW-65A
MW-65A		01/14/91	Well Replacement	Monitored monthly in accordance with Paragraph 5(e) of the Consent Order and Agreement for one year, January through December 1991; Added to bimonthly monitoring schedule, First Quarter 1992; low concentrations of analytes, monitoring discontinued 1/24/02
TW-66		03/31/88	BTX Plume Northern Extent Study	Temporary (5)
TW-67		04/04/88	BTX Plume Northern Extent Study	Added to bimonthly monitoring schedule, First Quarter 1992; low concentrations of analytes, monitoring discontinued 1/24/02
TW-68		04/05/88	BTX Plume Northern Extent Study	Temporary (5)
TW-69		07/07/89	Peters Creek Lagoon Investigation	Temporary (5)
TW-70		07/10/89	Peters Creek Lagoon Investigation	Temporary (5)
TW-71		07/11/89	Peters Creek Lagoon Investigation	Temporary (5)

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
TW-72		04/05/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-73		04/24/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-74		04/05/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-75		05/03/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-76		04/23/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-77		05/08/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-78		04/06/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-79		05/16/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-80		04/06/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-81		04/12/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-82		04/09/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-83		04/11/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-84		04/18/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-85		04/20/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-86		04/24/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-87		04/23/90	Keystone Groundwater (Well-7) Study	Temporary (5)
TW-88		04/26/90	Benzene Storage Area (Well-10) Study	Destoyed
TW-89		04/27/90	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-90		05/09/90	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-91		05/15/90	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-92		05/16/90	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-93		05/14/90	Benzene Storage Area (Well-10) Study	Temporary (5)
TW-94		07/09/91	River Wall Investigation	Bimonthly monitoring: recovery well
TW-95		11/12/92	River Wall Investigation	Damaged, Cannot Repair, Abandoned
TW-96		12/03/92	River Wall Investigation	Abandoned
RW-97		11/18/92	River Wall Investigation	Abandoned

TABLE A-7

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

WELL CLASSIFICATION AND STATUS
FOURTH QUARTER 2016

Well	New Designation	Installation Date	Purpose	Status
STM-MW-1		06/92	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-1		01/12/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-2		01/12/93	Crane Yard Investigation	Semiannual; low analyte concentrations, monitoring discontinued 1/24/02
CYMW-3		01/13/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-4		02/16/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-5		06/08/93	Crane Yard Investigation	Semiannual - water level reading only, effective 1/01; low concentrations of analytes, monitoring discontinued 1/24/02
CYMW-6		06/08/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-7		06/09/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-8		06/09/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
CYMW-9		06/10/93	Crane Yard Investigation	Not monitored under consent order, effective 8/94
MRSMW-1S		10/10/95	Motor Repair Shop Investigation	Monitoring Discontinued 8/96
MRSMW-1D	MRTW-1D	10/10/95	Motor Repair Shop Investigation	Bimonthly effective 1/98; semiannual effective 1/24/02; paved over, unable to locate, abandoned 04/13
MRSMW-3	MRTW-3	10/10/95	Motor Repair Shop Investigation	Bimonthly effective 1/98; semiannual effective 1/24/02; paved over, unable to locate, abandoned 11/07
MRSMW-4		10/10/95	Motor Repair Shop Investigation	Monitoring Discontinued 8/96
MRSMW-5	MRTW-5	10/10/95	Motor Repair Shop Investigation	Bimonthly effective 1/98; semiannual effective 1/24/02
MRSMW-7		10/10/95	Motor Repair Shop Investigation	Monitoring Discontinued 8/96
MRSMW-9		10/10/95	Motor Repair Shop Investigation	Monitoring Discontinued 8/96
MRSMW-10		10/10/95	Motor Repair Shop Investigation	Bimonthly effective 1/98; paved over, abandoned 1/24/02
RW-98		11/96	Keystone Area (well No. 7 area)	Monthly; Quarterly monitoring effective 1/24/02

" Installed by Baker/TSA Inc.

Notes:

MW - Monitoring Well
OW - Observation Well
RW - Recovery Well
RB, TB - Test Boring
TW - Temporary Well
SS - Storm Sewer

1) Not selected by PaDER as Consent Order monitoring well; not replaced.
2) Well not located on USX Clairton Works property.
3) Installed at Site before initiation of Phenol and Cyanide Study; no boring logs or construction records available.
4) Well installed for investigative purposes only.
5) Well installed for purposes of study; status will be updated upon completion of investigation.

TABLE A-8

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS

BTX PLUME RECOVERY TRENCH PERFORMANCE

FOURTH QUARTER
OCTOBER - DECEMBER 2016

Date	Flow Totalizer Reading	Benzene mg/L	Phenol mg/L	Average Gal/day	Average lbs/day Benzene	Average lbs/day Phenol
10/06/16	10209526	0.046	<0.005	208.57	0.00008011	0.00000000
10/13/16	10211006	0.040	<0.005	211.43	0.00007062	0.00000000
10/20/16	10212286	0.066	<0.005	182.86	0.00010077	0.00000000
10/27/16	10213588	0.036	<0.005	186.00	0.00005591	0.00000000
11/03/16	10214648	0.062	<0.005	151.43	0.00007839	0.00000000
11/10/16	10215706	0.018	0.005	151.14	0.00002272	0.00000631
11/17/16	10216406	0.037	0.006	100.00	0.00003090	0.00000501
11/23/16	10216926	0.057	<0.005	74.29	0.00003536	0.00000000
12/01/16	10217566	0.069	0.022	91.43	0.00005268	0.00001679
12/08/16	10218626	0.027	<0.005	151.43	0.00003414	0.00000000
12/15/16	10219060	No Sample - Frozen		62.00	0.00000000	0.00000000
12/22/16	10219586	0.007	0.017	75.14	0.00000439	0.00001066
12/29/16	10220166	0.012	<0.005	82.86	0.00000830	0.00000000
	Average	0.0398	0.004	133	0.00004418	0.00000298

Water samples collected by Veolia North America - Idustrial Business Group.
Laboratory analyses completed by USS, Clairton Works Laboratory.

TABLE A-9

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS
PETERS CREEK LAGOON
FOURTH QUARTER 2016 SAMPLING RESULTS

PARAMETERS	MW-101B	MW-102B	MW-104B	MW-103B	TW-69	OW-3	MW-103A	OW-2	TW-71	OW-1
Volatiles (8260, ug/l)										
1,1,1-Trichloroethane										
Benzene	< 0.2	0.5	6.5	513	1.0	1,970	4,500	1,510	3,020	39,000
Toluene										
Xylenes										
Semi-Volatiles (8270, ug/l)										
2,4-Dimethylphenol										
2-Methylphenol										
4-Methylphenol										
Phenol										
Naphthalene										
Aniline										
2-Picoline										
O-Toluidine										
Acetophenone										
Metals (Total, mg/l)										
Arsenic										
Barium										
Cadmium										
Chromium										
Copper										
Lead										
Mercury										
Nickel										
Selenium										
Zinc										
Cyanide										
Metals (Dissolved, mg/l)										
Antimony										
Arsenic										
Barium										
Cadmium										
Chromium										
Copper										
Lead										
Mercury										
Nickel										
Selenium										
Zinc										
Conventional										
Parameters (mg/l)										
Ammonia Nitrogen as N										
Phenolics										
Total Recoverable-4AAP)	0.015	0.805	< 0.005	0.041	< 0.005	0.017	0.318	0.361	0.077	5.62
Total Sulfide										
Total Organic Halogens										
Total Organic Carbon										
pH - field	7.83	7.79	8.02	8.53	11.83	8.74	14.51	11.83	7.65	11.69
Specific Conductance - field	1741	1483	1519	1327	1365	845	1856	1659	2650	2750

Volatiles, Semi-Volatiles Results in ug/l

Metals, Total and Dissolved, and Conventional Parameters - Results in mg/l

TABLE A-9

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS
PETERS CREEK LAGOON
FOURTH QUARTER 2016 SAMPLING RESULTS

PARAMETERS	P-1-I	P-4-I	P-8-I	TW-70	EQUIP. BLK.	DUPLICATE	TRIP BLK.
Volatiles (8260, ug/l)							
Acetone							
1,1,1-Trichloroethane							
Benzene	1.0	0.5	< 0.2	14.3	< 0.2	6.6	< 0.2
Toluene							
Xylenes							
Semi-Volatiles (8270, ug/l)							
2,4-Dimethylphenol							
2-Methylphenol							
4-Methylphenol							
Phenol							
Naphthalene							
2-Picoline							
Aniline							
O-Toluidine							
Metals (Total, mg/l)							
Antimony							
Arsenic							
Barium							
Cadmium							
Chromium							
Copper							
Lead							
Mercury							
Nickel							
Selenium							
Zinc							
Cyanide							
Metals (Dissolved, mg/l)							
Antimony							
Arsenic							
Barium							
Cadmium							
Chromium							
Copper							
Lead							
Mercury							
Nickel							
Selenium							
Zinc							
Conventional Parameters (mg/l)							
Ammonia Nitrogen as N							
Phenol Total Recoverable-4AAP)	0.012	0.006	< 0.005	0.015	< 0.005	< 0.005	< 0.005
Total Sulfide							
Total Organic Halogens							
Total Organic Carbon							
pH - field	8.03	7.97	7.62	7.65			
Specific Conductance - field	2410	1325	1702	994			

Volatiles, Semi-Volatiles Results in ug/l

Metals, Total and Dissolved, and Conventional Parameters - Results in mg/l

TABLE A-10

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS
PETERS CREEK LAGOON
GROUNDWATER ELEVATION MEASUREMENTS

	ELEVATION	4/8/2015	5/6/2015	6/1/2015	7/8/2015	8/5/2015	9/9/2015	10/8/2015	11/5/2015	12/1/2015	1/7/2016	2/4/2016	3/10/2016	4/7/2016	5/5/2016	6/1/2016	7/7/2016	8/4/2016	9/15/2016
MW-101B	771.50	729.70	NA	NA	NA	728.80	NA	728.60	NA	NA	NA	729.30	NA	729.30	NA	NA	NA	728.65	NA
MW-102B	775.05	732.45	NA	NA	NA	731.55	NA	731.05	NA	NA	NA	733.15	NA	732.05	NA	NA	NA	731.45	NA
MW-103B	775.62	NA	732.22	NA	NA	NA	731.02	NA	730.62	NA	NA	NA	732.52	NA	732.22	NA	NA	NA	731.32
MW-104B	776.07	736.07	NA	NA	NA	735.17	NA	734.77	NA	NA	NA	736.07	NA	735.67	NA	NA	NA	726.57	NA
MW-103A	772.74	NA	737.44	NA	NA	NA	736.34	NA	734.94	NA	NA	NA	737.54	NA	736.74	NA	NA	NA	735.74
OW-1	773.46	NA	740.36	NA	739.86	NA	738.46	NA	737.76	NA	739.16	NA	740.86	NA	739.86	NA	732.96	NA	738.56
OW-2	770.23	NA	734.23	NA	733.83	NA	733.33	NA	733.13	NA	734.13	NA	734.33	NA	734.43	NA	734.03	NA	733.83
OW-3	763.64	NA	736.14	NA	735.94	NA	735.44	NA	735.54	NA	736.14	NA	736.34	NA	736.24	NA	735.94	NA	735.74
OW-4	769.27	NA	736.27	NA	736.07	NA	735.47	NA	735.27	NA	736.27	NA	736.37	NA	736.27	NA	735.97	NA	735.77
TW-69	758.20	733.40	NA	NA	NA	732.90	NA	731.60	NA	NA	NA	732.90	NA	733.30	NA	NA	NA	733.10	NA
TW-70	774.74	NA	733.74	NA	NA	NA	733.14	NA	732.54	NA	NA	NA	743.34	NA	733.94	NA	NA	NA	735.64
TW-71	776.48	736.18	NA	NA	NA	735.58	NA	734.78	NA	NA	NA	735.63	NA	736.18	NA	NA	NA	735.33	NA
P-1S	770.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-1D	770.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-2S	772.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-2D	771.75	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3S	774.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-3D	774.38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4S	777.93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-4D	777.71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-5S	776.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6S	764.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-6D	764.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-7S	776.85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-8S	773.67	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-8D	773.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-9S	778.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-9D	778.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WELL-16	774.13	NA	734.43	NA	733.63	NA	733.43	NA	733.03	NA	732.63	NA	734.53	NA	734.23	NA	733.93	NA	733.53
WELL-17	761.73	740.13	NA	NA	NA	739.53	NA	737.73	NA	NA	NA	739.08	NA	739.83	NA	NA	NA	738.48	NA
P-1-1	769.28	729.88	NA	NA	NA	728.98	NA	728.68	NA	NA	NA	729.43	NA	729.48	NA	NA	NA	728.78	NA
P-4-1	776.72	733.22	NA	NA	NA	732.22	NA	731.72	NA	NA	NA	732.62	NA	732.72	NA	NA	NA	732.12	NA
P-8-1	773.14	729.24	NA	NA	NA	728.34	NA	728.04	NA	NA	NA	728.84	NA	728.84	NA	NA	NA	728.22	NA

ELEVATIONS ARE MEASURED FROM THE TOP OF CASING (TOC)

TABLE A-10

UNITED STATES STEEL CORPORATION
CLAIRTON WORKS
PETERS CREEK LAGOON
GROUNDWATER ELEVATION MEASUREMENTS

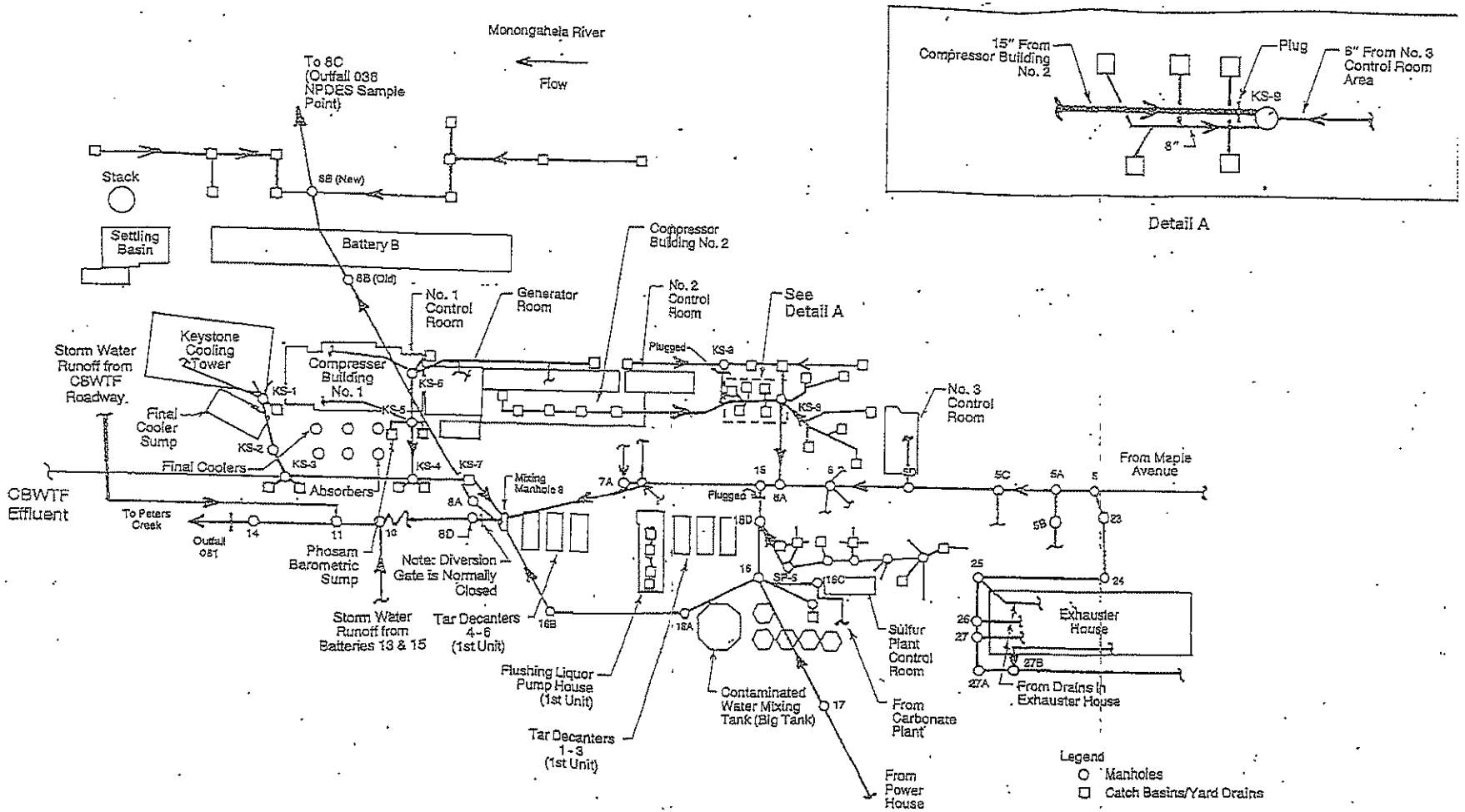
	ELEVATION	10/6/2016	11/10/2016	12/1/2016
MW-101B	771.50	728.80	NA	NA
MW-102B	775.05	731.25	NA	NA
MW-103B	775.62	NA	731.92	NA
MW-104B	776.07	734.87	NA	NA
MW-103A	772.74	NA	736.64	NA
OW-1	773.46	NA	739.46	NA
OW-2	770.23	NA	732.03	NA
OW-3	763.64	NA	735.84	NA
OW-4	769.27	NA	736.07	NA
TW-69	758.20	732.90	NA	NA
TW-70	774.74	NA	733.74	NA
TW-71	776.48	734.98	NA	NA
P-1S	770.00	NA	NA	NA
P-1D	770.02	NA	NA	NA
P-2S	772.31	NA	NA	NA
P-2D	771.75	NA	NA	NA
P-3S	774.21	NA	NA	NA
P-3D	774.38	NA	NA	NA
P-4S	777.93	NA	NA	NA
P-4D	777.71	NA	NA	NA
P-5S	776.64	NA	NA	NA
P-6S	764.97	NA	NA	NA
P-6D	764.37	NA	NA	NA
P-7S	776.85	NA	NA	NA
P-8S	775.67	NA	NA	NA
P-8D	773.52	NA	NA	NA
P-9S	778.99	NA	NA	NA
P-9D	778.87	NA	NA	NA
WELL-16	774.13	NA	733.63	NA
WELL-17	761.73	738.13	NA	NA
P-1-I	769.28	728.88	NA	NA
P-4-I	776.72	731.82	NA	NA
P-8-I	773.14	728.34	NA	NA

ELEVATIONS ARE MEASURED FROM THE TOP OF CASING (TOC)

APPENDIX B

FIGURES

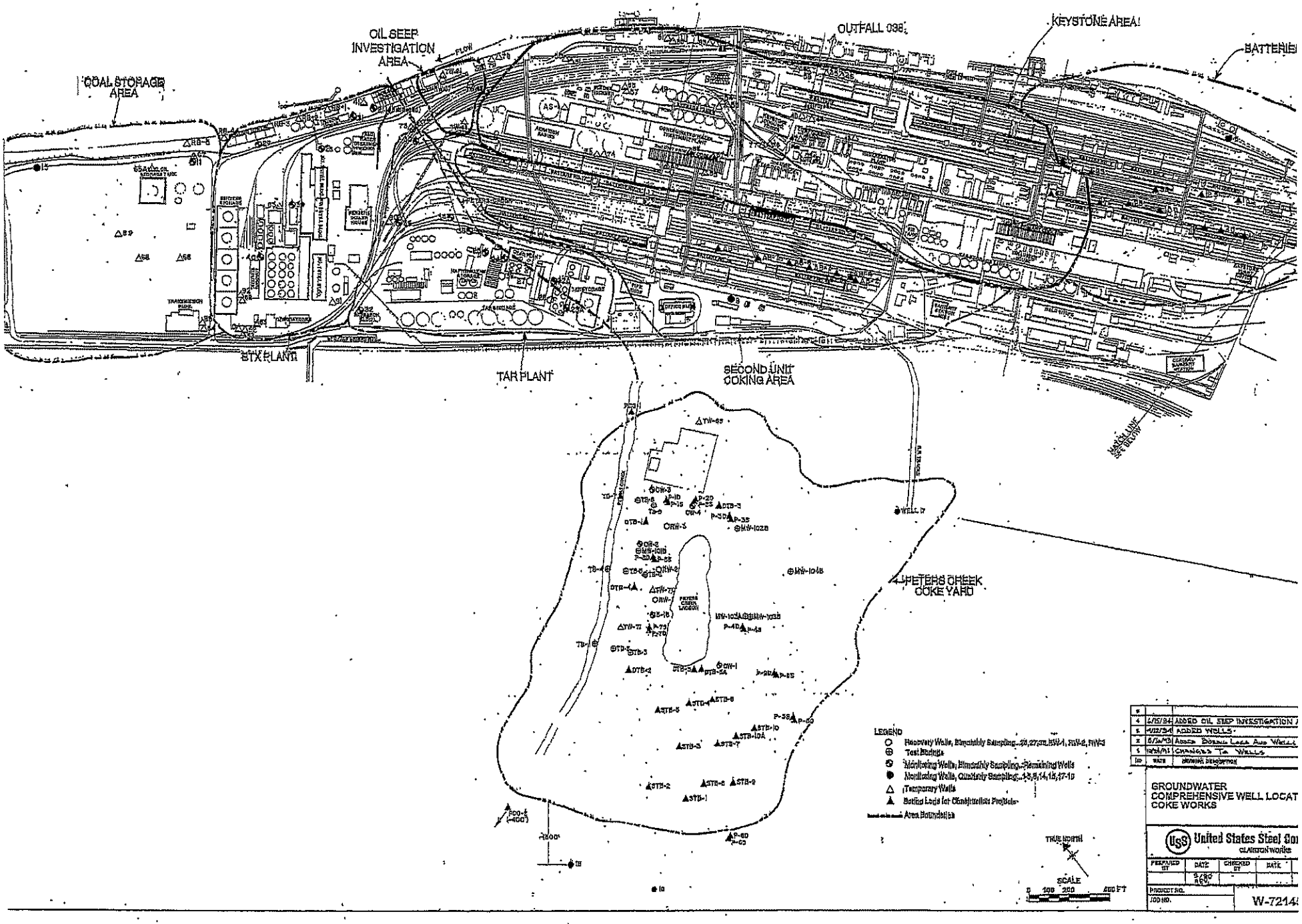
3663-23-2	Outfall 038 (009) Sewer System Schematic
Drawing W-72145-1	Groundwater Monitoring Well Location – Coke Works
Drawing W-72145-2	Groundwater Monitoring Well Location – Steel Works
Figure 1	Monitoring Well Locations - Crane Yard
Figure 2	Monitoring Well Locations - Motor Repair Shop

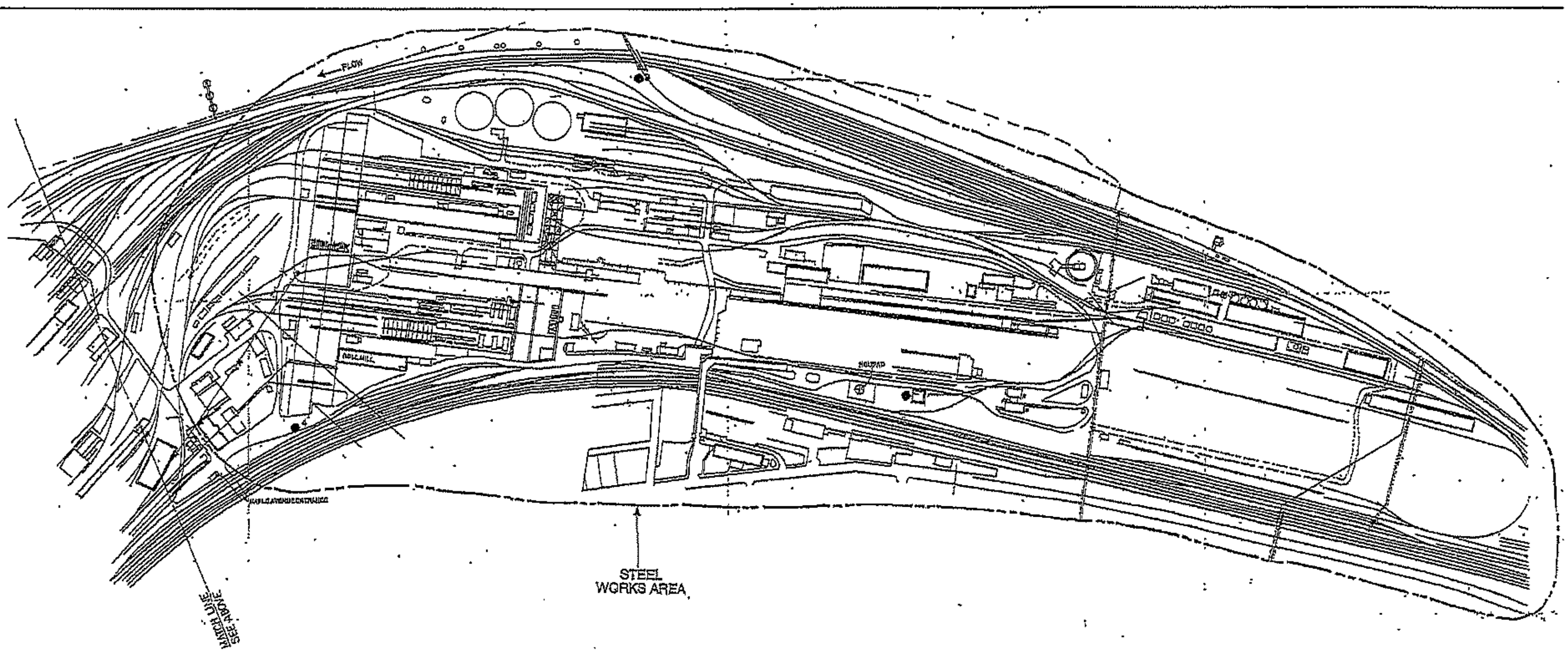


Drawn By: JS	Scale: NTS	CHESTER ENVIRONMENTAL	USS A Unit of USX Corporation Clairton Works Outfall 038 Sewer System Schematic	Dwg. No. Figure 3663-23-2
Checked By: DCF	Date: April 1994			
Approved By:				

54774

DRUHING


COAL STORAGE AREA
OIL SEEP INVESTIGATION AREA
OUTFALL 036
KEYSTONE AREA
BATTERIES
BTX PLANT
TAR PLANT
SECOND UNIT COKING AREA
PETERS CREEK COKE YARD
LEGEND
Recovery Wells, Bimonthly Sampling...28,27,26,RW-1, RW-2, RW-3
Test Borings
Monitoring Wells, Bimonthly Sampling...Remaining Wells
Monitoring Wells, Quarterly Sampling...13,9,14,15,17-19
Temporary Wells
Boring Logs for Geophysical Profiles
Area Boundaries
TRUE NORTH
SCALE
0 100 200 400 FT
GROUNDWATER
COMPREHENSIVE WELL LOCAT
COKE WORKS
United States Steel Cor
CLAIRTON WORKS
W-7214



LEGEND

- ○ Recovery Wells, Bimonthly Sampling...26,27,38,RW-1,RW-2,RW-3
- ◍ Monitoring Wells, Bimonthly Sampling...Remaining Wells
- ● Monitoring Wells, Quarterly Sampling...1-5,8,14,15,17-19
- ------- Area Boundaries

TRUE NORTH

SCALE

0 100 200 400 FT.

NO	DATE	REVISION DESCRIPTION
5		
4		
3		
2		
1	5/30/95	Change T- Wells, Oper. Etc

GROUNDWATER
COMPREHENSIVE WELL LO
STEELWORKS

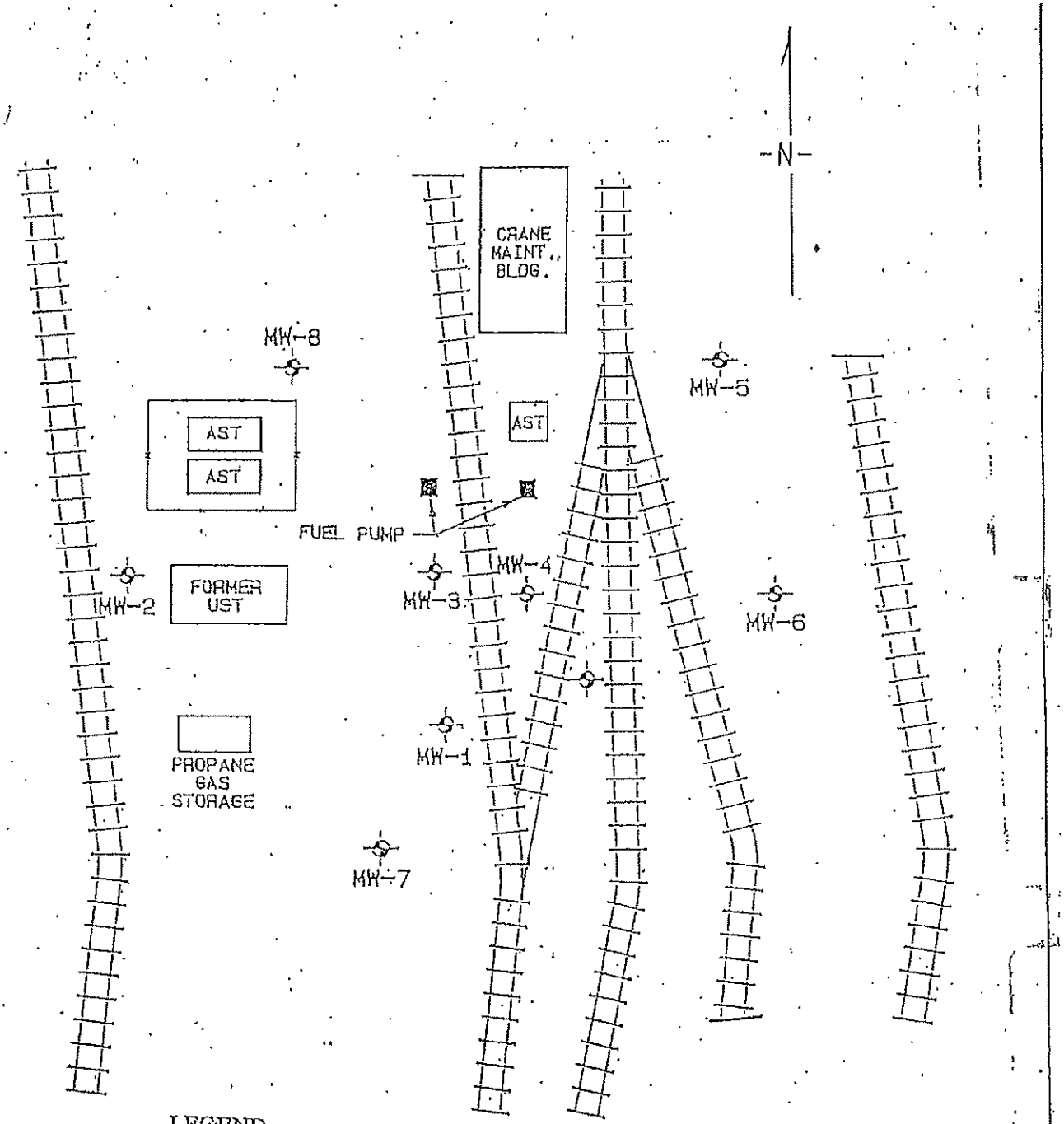
United States Steel
CLAIRTON WO

PREPARED BY	DATE	CHECKED BY	DATE
	4/90 REV.		

PROJECT NO.

JOB NO.

W-7



LEGEND

AST – ABOVEGROUND STORAGE TANK

UST – UNDERGROUND STORAGE TANK

MONITORING WELL LOCATION

NOT TO SCALE

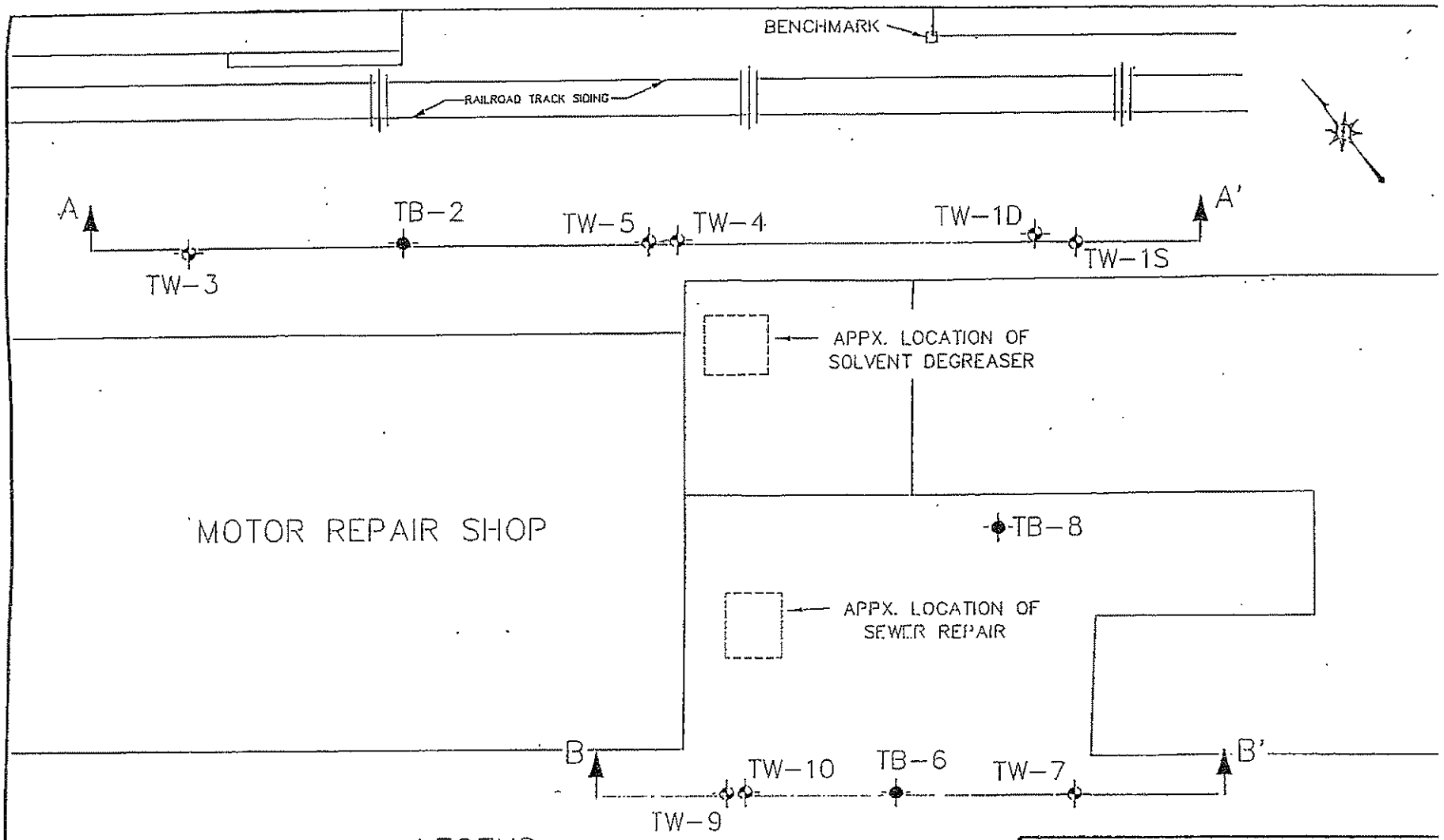
CHESTER ENVIRONMENTAL

FIGURE 1

MONITORING WELL LOCATION MAP
CRANE MAINTENANCE AREA
U. S. STEEL CORPORATION
CLAIRTON, PENNSYLVANIA

10/20/93

C69798



LEGEND

TW-3 ⊕ TEMPORARY WELL

TB-2 ⊕ TEST BORING

A A' GEOLOGIC CROSS-SECTION

REFERENCE: "PLAN OF MONITORING WELLS", DRAWING DATED NOVEMBER, 1994, BY GATEWAY ENGINEERS, INC., OF PITTSBURGH, PA.

WEG

FIGURE 2
EXPLORATION LOCATION PLAN

U. S. STEEL – CLAIRTON WORKS
CLAIRTON, PENNSYLVANIA

WEAVERTOWN ENVIRONMENTAL GROUP
CANONSBURG, PENNSYLVANIA

SCALE:	DATE:	PROJECT NO:
1"=20'	1/17/95	NG-1769-93
DRAWN BY:	CHECKED BY:	DRAWING NO:
MJE	DMB	1769a1